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THE CAUSATION OF THE DISEASES OF WOMEN.

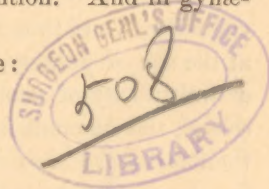
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WITHIN recent years activity among gynæcologists has taken the form of improvement in the technique of operations; and as an outgrowth of the large number of operations which have been performed, the pathology of diseases of women has likewise been improved. Comparatively little has been written concerning the causation of the diseases of women, although the subject is one of great importance, in view of its bearing upon preventive medicine. Only as the causes of disease are made known to the profession at large is it possible to take measures for their prevention. And in gynæcology, especially, prevention is far better than cure.

The principal causes of the diseases of women are:

1. Imperfect development of the sexual organs.
2. Gonorrhœa.
3. Septic inflammation following childbirth.
4. Lacerations due to childbirth.
5. Miscellaneous causes, including constipation, erroneous habits of life, and errors of dress.



1. IMPERFECT DEVELOPMENT OF THE SEXUAL ORGANS.

The influence of imperfect development of the sexual organs as a cause of disease of women cannot well be over-estimated. At the present time not so much is said of the influence of this factor in producing disease, because it has been more or less lost sight of since tubal and ovarian pathology has so much occupied the attention of gynæcologists. The experience of every observant practitioner demonstrates the prevalence of imperfect development, and also its influence in producing various diseases of women. As a rule, when the development of the sexual organs is arrested the development of the body, as a whole, is also interfered with. Such women, almost without exception, belong to the class of neurotics, and they are especially liable to all manner of neuroses, including, especially, chorea, headache, and neuralgia. The most striking signs of this condition are the late development of puberty, the imperfect and painful character of menstruation, and the fact that the history of semi-invalidism, almost without exception, can be obtained. Puberty is often delayed, even as long as the eighteenth or nineteenth year, or longer. Menstruation is always painful. The pain belongs to the type of so-called ovarian dysmenorrhœa; that

is to say, it begins one or several days, or even a week, before the menstrual flow, and is felt especially in the ovarian regions. Reflex neuroses are common accompaniments, especially headache, disordered digestion, or even sick-headache. Uterine dysmenorrhœa, due to the undeveloped condition of the uterus (especially of the cervix), which is in general sharply anteflexed, is frequently present. This is indicated by its paroxysmal character, and by the fact that, as a rule, it is much less marked after the flow has become fully established.

The reason why the development of the sexual organs of girls becomes arrested is not absolutely demonstrated. The influence of modern education as a cause has been much dwelt upon, and the evidence in support of this theory is very strong. The influence of the crowded courses and frequent examinations in our schools in developing the nervous system at the expense of the rest of the body, and later in breaking down the tone of the nervous system through overwork, has been abundantly proven. The emotional side of the female character likewise is stimulated. As a result of these conditions the digestion of growing girls is apt to become deranged, and their sleep likewise to be disturbed. As a further consequence anæmia and depraved nutrition follow, aggravating the neurotic conditions already engendered, and thus completing the vicious circle. When such girls arrive at the age of puberty, especially if at the time they are being crowded with a multiplicity of studies to enable them to enter a fashionable finishing school, the demands upon the nervous system to enable them to accomplish their tasks are such that the processes which are necessary to bring about the proper development of the sexual organs are not brought into play,—enough vital force is not left over to accomplish this result. The testimony of urban practitioners is unanimous upon this point, hence it must be considered as established that too great mental occupation directly hinders the development of the sexual organs, and not only that, but at the same time breaks down the tone of the general nervous system.

Other causes, however, must be considered. Some of the most marked cases of the arrested development of the sexual organs which have come under my notice have been among the poor. These girls not only had not been forced at school, but in not a few cases they had never been to school. In some of them it seemed to me that the cause was too early and too laborious work, especially in mills. I have had numerous patients among mill operatives who had gone to work as children in mills, and who had worked full-time during the years when the greatest development takes place. In these girls it was probable that a lack of fresh air, of out-of-door exercise, and an insufficiency of nutritious food, together with too much work, were at the bottom of the difficulty. A curious class of cases but little understood is that in which extreme corpulency is present. I have seen numerous cases in which menstruation was tardily established, never perfectly performed, and which ceased or became scanty and irregular between the twentieth and thirtieth years. Whether the imperfect character and early cessation of menstruation was due to obesity, or whether the obesity

was due to the absence of menstruation, I have never been able to satisfy myself. However, my own experience fully confirms the current opinion that obesity bears a certain relation to scanty and imperfect menstruation. The development of the sexual system in women is one of the mysteries of nature, and the exact forces which bring it about will probably never be perfectly known; but it is rational to believe that the existence of good health about the time of puberty has much to do with its proper development. The care of growing girls, particularly between the ages of nine and sixteen years, is a subject of the utmost importance, and the profession has no more urgent duty than to instruct mothers concerning the importance of the proper care of girls during that period. Girls who are inclined to be neurotic, and whose digestion and nutrition are at fault, should not be treated in the same way as their stronger and more phlegmatic sisters. Their duties at school should be lightened, they should be more in the open air, and any functional disease which may exist should be cured. In this way some surplus vital force may be stored up to be called upon when necessary in the development of the sexual system. Also, when menstruation fails to appear at its accustomed time especial care is necessary. It is at this time that therapeutics has the best opportunity to influence the patient. The health of all such girls should be carefully inquired into and all indications for treatment should be met. In particular, the administration of iron, arsenic, and strychnia and out-of-door exercise are to be commended. Such cases should not be lost sight of until menstruation is fully and perfectly established. I feel confident that if this plan be carried out there will be fewer cases of dysmenorrhœa and sterility upon the one hand, and of laceration of the cervix and perineum upon the other, and also fewer cases of chronic ovaritis and ovarian cystomata. I have purposely not made mention of the higher grades of imperfect development, and of the cases in which one or more of the sexual organs are entirely absent. These cases belong to a different category, from the stand-point of practical medicine.

2. GONORRHŒA.

The fact that gonorrhœa is a disease of women has, of course, been known for centuries, but a full knowledge of the course and results of the disease is a matter of the immediate present. Bernutz was the first author who had a proper conception of the disease (about 1850). His knowledge was acquired, as most of the exact knowledge of medicine has been acquired, by the post-mortem study of cases. As physician to the Lourcine Hospital, where he had a large venereal service, he had ample opportunity to study the disease. In his analysis of the ninety-nine cases of pelvi-peritonitis upon which he bases his exposition of the subject, he gives, as a cause of the condition, gonorrhœa in twenty-eight cases. Forty-three are considered to be puerperal, twenty menstrual, and eight traumatic. Of the remaining twenty-eight non-puerperal cases there can be no question, when reading his report in the light of modern knowledge, that almost all of them were gonorrhœal. Bernutz, who was a very careful and accurate ob-

server, cautions his readers against drawing the conclusion that so large a proportion of cases of pelvi-peritonitis (inflamed tubes and ovaries with secondary peritonitis) are gonorrhœal in origin. He states that in his opinion the reason why this proportion existed in his cases was owing to the character of the hospital in which they were observed.

Bernutz fully recognized the fact that gonorrhœa not only involves the vulva, urethra, vagina, and womb, but also the Fallopian tubes, the ovaries, and the peritoneum. He reports numerous cases amply demonstrating these facts, and treats the entire subject in a most intelligent manner. His observations, however, failed to make much impress upon the profession, and it was not until Noeggerath, in 1873, published his paper on "Latent Gonorrhœa in the Female Sex," that attention was called to the very serious ravages of gonorrhœa in women. Prior to that time gonorrhœa was looked upon as a mere trifling vulvo-vaginitis, of importance principally because of the fact that the disease might be communicated to men. The views of Noeggerath encountered much opposition, and their spirit was not fully accepted until their truth was demonstrated by the work of the modern abdominal surgeons. It is now fully established that gonorrhœa is one of the most important causes of uterine, tubal, ovarian, and peritoneal inflammation. Exactly what percentage of cases of inflammation of the uterine appendages is due to gonorrhœa has not been determined, although unquestionably the percentage is not inconsiderable. The opinions and experience of surgeons differ widely with reference to this question, and there is good reason to believe that the percentage depends upon the character of the community in which the surgeon resides. Urban communities containing large numbers of the poor and the vicious, and of the rich and immoral, undoubtedly have a higher percentage of cases due to gonorrhœa than rural communities having a more decent population.

3. SEPTIC INFLAMMATION FOLLOWING CHILDBIRTH.

The results of septic infection in childbed have been so prominently dwelt upon since the days of Oliver Wendell Holmes and Semmelweis that one cannot, at this time, hope to offer any new ideas upon the subject. Increasing experience only serves to demonstrate the serious results of this accident. It is unnecessary to refer here to fatal puerperal septicæmia. We shall concern ourselves only with those cases which have not had a rapidly fatal termination, and which concern the gynæcologist as much as or more than the obstetrician. Septic vaginitis, endometritis, and metritis are well-known forms of puerperal inflammation. They frequently persist and require treatment after the puerperal period. Aside from the rapidly fatal cases, the most serious result of septic infection during labor is the spread of the septic inflammation to the uterine appendages, giving rise to salpingitis, ovaritis, and peritonitis. This condition probably at times ends in perfect recovery. More usually it results either in chronic inflammation of the appendages, with the formation of adhesions to the neighboring structures, or in collections of fluid—serum, blood, or pus—in the tubes or in

the ovaries. The relative frequency of puerperal septic inflammation and of gonorrhœa as the cause of inflammation in the uterine appendages is a mooted point. Most surgeons believe that the puerperal inflammation is by far the more frequent cause; others hold that gonorrhœa is the more frequent cause, and they point out that inflammation of the uterine appendages following labor need not necessarily be puerperal in origin, because the puerperal inflammation itself may have been set up by a pre-existing gonorrhœa. That this last claim is to a certain extent a valid one my own experience tends to show; but many accurate observations must yet be made before it can be determined with what frequency existing gonorrhœa is the cause of inflammation in childbed.

Another but far less frequent result of puerperal infection is acute inflammation or abscess of the broad ligaments,—acute puerperal cellulitis and true pelvic abscess. Inflammation of the connective tissue of the broad ligaments formerly was believed to be the common form of puerperal inflammation outside of the womb, but when abdominal surgeons proved that what had been called *chronic cellulitis* in the *non-puerperal* state was in reality diseased uterine appendages, the tendency was to take extreme ground and to deny the existence of *acute puerperal* cellulitis and true pelvic abscess.

In addition to the varieties of puerperal inflammation described we have cases of phlebitis, and its associated condition, *phlegmasia alba dolens*.

As already remarked, it is not positively known what percentage of cases of tubo-ovarian inflammation is due to puerperal septic inflammation; but it is known that the percentage is a high one. Gonorrhœa and puerperal sepsis together cause fully ninety-five per cent. of all cases of tubo-ovarian inflammation. The importance of this fact from the stand-point of preventive medicine cannot be over-estimated. And the same is true of the curative treatment of gonorrhœa and puerperal septicæmia. If both these conditions were treated early and vigorously, and if the treatment were continued for a long time until the gonorrhœa was cured, and the results of the puerperal sepsis removed so far as possible, there would be far fewer cases of chronic pelvic inflammation. Under the present methods of practice it is the disease which the gynæcologist is called upon most frequently to treat.

4. LACERATIONS DUE TO CHILDBIRTH.

Lacerations due to childbirth constitute an important class of the diseases of women. The relation of lacerations of the cervix uteri to subinvolution of the pelvic organs, especially of the womb, and to endometritis, has been made known through the labors of American gynæcologists, especially Dr. Emmet. For a time after the observations of Dr. Emmet were made public there was a tendency to magnify the importance of lacerations of the cervix, and succeeding that a reactionary tendency to make light of the importance of this lesion, but the conclusion of the entire profession, based upon experience and common sense, practically supports Dr. Emmet in his original teachings concerning this lesion. It is not my pur-

pose here to discuss the causes of lacerations of the cervix further than to say that my own experience is in accord with those who believe that many cases of lacerations of the cervix are directly due to the fact that the pregnancy has taken place in an imperfectly-developed womb,—the imperfect development being most marked in the cervix. Such a womb and cervix are not fitted to pass through the ordeal of labor unscarred. The cervix has to bear the brunt of the battle, and as a result of its imperfect development lacerates instead of dilating. This fact emphasizes the great importance of securing a full development of the womb.

Lacerations of the pelvic floor are of even more importance than lacerations of the cervix uteri. The giving way of the pelvic floor (the laceration of the levator ani and of the pelvic fascia) is at the bottom of almost every form of prolapse of the pelvic viscera. Cystocele, rectocele, and prolapsus uteri are due, almost without exception, to lacerations of the pelvic floor.

5. MISCELLANEOUS CAUSES.

Constipation plays an important rôle in the causation of some of the diseases of women. The fact that women very frequently suffer from constipation is well known. This is as true of young women as it is of their older sisters. Probably the principal reason for this is the in-door, rather inactive life which women lead; but an important factor is the habit which so many women form of having no regular time to have the bowels move. In this way the rectum is taught to tolerate the presence of feces, which accumulate until the occurrence of headache, loss of appetite, and malaise (symptoms of fecal absorption) force the patient to secure a stool either by the use of an enema or by taking a purge. This over-filling of the rectum interferes with the circulation, and in this way promotes congestion of the pelvic viscera. This habit predisposes to the development of hemorrhoids, also to uterine and ovarian congestion. It is usually assigned as one of the causes of retroversion of the womb and of prolapse of the ovaries. I believe that it does predispose to both of these conditions. The full rectum can displace the cervix forward, and the straining at stool, especially if the bladder chance to be full, can topple the womb over backward. Relaxation and loss of tone of the pelvic tissues due to congestion also predispose to retro-displacement of the womb and to prolapse of the ovaries.

Constipation aggravates the symptoms due to every variety of pelvic disease. This is brought about partly by inducing pelvic congestion, and partly through the deterioration of the general health, produced by fecal absorption and the contamination of the blood, and by the loss of appetite and disordered digestion.

ERRONEOUS HABITS OF LIVING.

Erroneous habits of living favor the development of pelvic disease just as they favor the development of disease in other parts of the body. Pelvic diseases may be produced either by habits of indolence, inducing a sluggish circulation and an atonic condition of the tissues, especially of the muscular

system; or by habits of luxury, which usually involve the preceding, with the addition of irregular hours, more or less dissipation, and the overloading of the stomach with rich foods and wines; or, on the other hand, by too laborious and continuous work, overtaxing the strength of the individual, and by greatly increasing intra-abdominal pressure, tending to displace downward the pelvic viscera,—in this way, at times, even in little girls producing complete prolapse of the womb.

ERRORS IN DRESS.

Errors in dress is a subject of large importance, but it is only possible here to touch upon it. The principal error in women's dress, as arranged at present, is that by it the waist is unduly constricted. As this is brought about by means of the corset, which not only constricts the waist but also constitutes a brace confining the lower part of the chest, and also the abdomen, several results are induced. The first and perhaps the most important is the interference with respiration. It has been conclusively shown that the type of breathing of the female, normally, is the same as that of the male,—diaphragmatic or abdominal,—but owing to the pressure of the corset the excursions of the diaphragm are limited, and the same is true of the lower ribs and the abdominal wall. The result is that the use of the corset has changed the type of women's breathing to the costal, or really the upper costal. The principle of accommodation doubtless largely diminishes the interference with the normal circulation which this alteration in the normal type of breathing would otherwise produce. The second result of this method of dress is to make continuous pressure upon the abdominal vessels, and thus to interfere with the return circulation from the lower half of the body,—promoting congestions in this region, which includes the pelvis. The third result is the displacement downward of the abdominal viscera, causing a protrusion of the lower anterior abdominal wall and forcing the intestines down upon the pelvic viscera. In this way the displacement of the pelvic viscera is favored. The effect of the pressure of the corset upon the muscles of the middle portion of the trunk, and the support which the corset gives in holding the trunk upright, thus doing away with the necessity for muscular action in supporting the trunk, is to bring about the partial atrophy (or at least an atonic condition) of these muscles. The loss of normal tone in the abdominal muscles changes entirely the normal condition of intra-abdominal pressure, favoring the displacement of the abdominal viscera, and takes away from the return circulation of blood in the abdomen one factor which normally is of great assistance in forcing the blood onward towards the heart.

Another error in the present mode of women's dress is the manner in which the skirts are fastened to the body. This is by means of bands fastened about the waist. The effect of this method is that the entire weight of the skirts hangs upon the abdomen and hips. In women having a somewhat protuberant abdomen practically the entire weight of the skirts is supported by the abdomen. This adds to the intra-abdominal pressure, and

tends to force the contents of the abdomen into the pelvis. A further bad effect is that the waist-band of the skirts compresses the trunk at the smallest part of the waist, and adds to the ill effects of the pressure of the corset itself.

It has not been our purpose here to discuss the subject of practical methods of dress reform, but merely to point out the ill consequences of the present mode. The principles which underlie dress reform are: 1. That the waist shall not be unduly constricted, so that the circulation and respiration shall not be impeded. 2. That the trunk shall not be encased in a brace, but that the muscles of the trunk shall be called upon to perform their normal function, which includes the sustaining of the trunk upon the pelvis and legs, and their proper part in the work of respiration, and in assisting in the return circulation of the blood. 3. That the weight of the clothing shall be supported upon the shoulders. These principles are unquestionably sound, and happily methods of dress based upon them have been so perfected that at the present time women can dress in accordance therewith and not sacrifice either taste or beauty.

PRACTICAL CONCLUSIONS.

My object in presenting this paper is not to offer anything new, but to cover in a systematic way the causes of the diseases of women in order to show their limited character, and that these causes are principally of a preventable character. If I have succeeded in doing this, it follows that, if proper attention were paid by the profession to the prevention of the causes which produce the diseases of women, these diseases could be very greatly restricted.

If proper attention were given to growing girls, especially about the time of puberty, and a more normal development of the sexual organs secured; if gonorrhœa were more vigorously treated, and if the subjects of that disease were kept under observation until all abnormal discharges were arrested, and proper instructions concerning the abstention from sexual intercourse were given; if antiseptic midwifery were faithfully and efficiently practised; if lacerations of the cervix and perineum were early repaired; and if full instructions concerning the ill effects of constipation, improper dress, and erroneous habits of living were given, the prevalence of the diseases peculiar to women would be very greatly restricted. I believe that this is to be the next great advance in diseases of women. Gynecologists must bring home to the general practitioner the fact that the diseases of women are largely preventable, and make him feel his responsibilities both as to their production after present methods of practice and as to the possibilities of their prevention after improved methods. When the family physician realizes that it lies within his power very largely to prevent disease among the women of the families committed to his care, his sense of moral obligation will spur him on to do his full duty in this matter. When that day comes the universal prevalence of disease among women will cease to be a reproach to preventive medicine,